

WHAT IS CLAIMED:

1. ~~A suction-type seed metering apparatus operably arranged in combination with a seed storage hopper, said seed metering apparatus comprising:~~

~~a disc vertically mounted for driven rotation about a fixed rotary path of movement and having a circular row of apertures adjacent a periphery of said disc; and~~

~~a housing arranged in seed receiving relation relative to said seed hopper, said housing having its interior divided by said disc into two adjacent enclosures, with one enclosure at least partially defining a chamber for seeds, and with the other enclosure extending at least partially around the path of movement of the disc apertures and constitutes a vacuum chamber having leading and trailing ends with an opening leading to said chamber intermediate said leading and trailing ends, with said trailing end of said chamber being arranged adjacent a seed drop area from whence seeds gravitationally fall for deposit in a furrow, and wherein said housing is provided with an opening arranged proximate to the seed drop area for enhancing the release of seeds from the disc of the metering apparatus.~~

2. The seed metering apparatus according to Claim 1 wherein said housing comprises a split assembly including a first housing that is carried by and connected to said hopper and a second housing that releasably connects to said first housing and permits access to said the interior of said housing when said second housing is removed from said first housing.

3. The seed metering apparatus according to Claim 2 wherein said first housing includes an axially extending circumferential wall arranged in surrounding relation to a substantial portion

of the outer peripheral edge of said first housing, wherein said circumferential wall defines a circumferential opening therein, and wherein said circumferential opening is specifically sized to allow atmospheric air to flow into said housing on that side of the disc opposite from said vacuum chamber to inhibit seeds released from said disc from being drawn upwardly under the influence of said vacuum thereby effecting uniform spacings between seeds.

4. The seed metering apparatus according to Claim 1 wherein said disc has a circular periphery measuring about 300 mm. in diameter is flat and enhances direct seed release of seeds.

5. The seed metering apparatus according to Claim 1 wherein said opening provided in said housing comprises a plurality of vertically spaced and elongated slots defined by said enclosure defining the air in this chamber to be equal that on the outside.

6. A seed metering apparatus operably arranged in combination with a seed storage hopper said seed metering apparatus comprising:

a disc mounted for driven rotation about a fixed rotary path of movement and having a circular row of apertures adjacent a periphery of said disc; and

a housing arranged in seed receiving relation relative to said seed hopper, said housing having its interior divided by said disc into two adjacent enclosures, with one enclosure serving as a seed reservoir and the other, lying around a portion of the path of motion of the apertures, defining a vacuum chamber with leading and trailing ends, wherein the trailing end of said vacuum chamber of said being disposed proximate to a seed discharge area from whence

seeds are gravitationally deposited into a furrow, and wherein said housing defines an opening arranged proximate to the seed discharge area of the metering apparatus for promoting the release of seeds from the disc in the seed discharge area of the metering apparatus.

7. The seed metering apparatus according to Claim 6 wherein said housing is comprised of a releasably interconnectable first and second housings arranged in seed receiving relation relative to said seed storage hopper.

8. The seed metering apparatus according to Claim 7 wherein said first housing defines a rigid member having an upright rim extending circumferentially thereabout to define the seed reservoir opening to the seed storage hopper and a drop chute for discharging seeds to a furrow, and wherein said second housing has a disc like shape sized to combine with the rim of said first housing thereby closing said housing when said first and second housings are connected to each other.

9. The seed metering apparatus according to Claim 8 wherein said second housing defines an air cut-off formed integrally with said second housing in the seed drop area.

10. The seed metering apparatus according to Claim 5 wherein said disc has a circular periphery measuring about 300 mm. in diameter.

11. The seed metering apparatus according to Claim 5 wherein the opening defined by said housing comprises a plurality of vertically spaced holes defined by said enclosure serving as said seed reservoir.

12. A seed metering apparatus for receiving seeds from a seed hopper and depositing the seeds at substantially regular intervals into a furrow, said seed metering apparatus comprising:

a vacuum source;

a housing assembly comprising a first and second releasably interconnected housing, said first housing having an open sided cavity framed by a circumferential rim with the lower portion of said cavity defining a seed reservoir that receives seeds from said seed hopper, a drop chute formed integral with said first housing in separated relation from said reservoir and extending from a seed discharge area of said housing assembly for discharging seeds from said housing assembly toward said furrow, said second housing having an interior surface arranged in operable combination with the rim of said first housing to close said cavity, said second housing defining a chamber with leading and trailing ends and an opening leading to said chamber between the leading and trailing end thereof and connectable to said vacuum source, said second housing having an opening arranged proximate to the seed discharge area of said housing assembly; and

a disc shaped metering member having a periphery rotatably fitting within said rim of said first housing and having a series of openings arranged toward a margin of said disc for receiving a seed under the influence of pressure differentials acting thereon, said disc being rotatably mounted such that each opening in the disc is sequentially brought into communication

with said seed reservoir and advances toward said drop chute whereas seeds are separated from the disc and pass into said chute for discharge to the furrow.

13. The second seed metering apparatus according to Claim 12 wherein the circumferential rim of said first housing defines a circumferentially elongated slot specifically sized to allow atmospheric air to flow into said housing assembly on a side of said disc opposite from said vacuum chamber to inhibit seeds released from said disc from being drawn upwardly under the influence of said vacuum to effect uniform spacing between adjacent seeds.

14. The seed metering apparatus according to Claim 13 wherein said first housing further includes a plurality of vertically spaced rows of openings in the seed discharge area of the housing assembly for facilitating release of seeds from said disc.

15. The seed metering apparatus according to Claim 12 wherein said second housing defines an air cut-off formed integrally therewith in the seed discharge area of the housing assembly.

add
a5